

Missiles

They Play Large Role in Today's War

By WILLIAM BEECHER

WASHINGTON—The sinking of the Israeli destroyer Elath by vintage but still obviously effective Styx missiles launched by small 75-ton Egyptian patrol boats gives some notion of how far the missile has insinuated itself throughout every aspect of modern warfare.

From the relatively crude German V-1 buzz bomb of World War II to the ultra-sophisticated Minutemen and Polaris missiles of today, the guided missile has come a long way. And weapons experts say it has a long way yet to go.

Long-range, nuclear-tipped missiles have supplanted bombers as the cornerstone of America's deterrence policy; these ICBM's are primed to retaliate overwhelmingly against any attacker. And anti-missile missiles, still in their infancy, are being deployed by the Soviet Union, and soon will be by the United States, in hopes of limiting, if not eliminating, the devastation threatened by ICBM's.

The missile has bulked so large in the weapons planner's eye in recent years that it has all but usurped the role of the more conventional weapon, sometimes to the detriment of the fighting man. For example, the F-4 Phantom, the hottest American fighter-bomber in Vietnam, was armed only with air-to-air missiles when it first entered the air war over North Vietnam.

Some enemy MIG pilots soon learned, however, that if they maneuvered in very close to the Phantoms, their guns could be more effective than the missiles. This was because heat-seeking Sidewinder missiles have to move off some distance before their warheads arm themselves. The result: the Phantoms have since been given rapid-fire cannons to supplement their missiles in dog-fights.

Superb Weapon

This is not to denigrate the efficacy of the Sidewinder; if the American flier can spot the enemy far enough away, or slide around behind his tail pipe, the heat-seeking weapon is superb, pilots say.

Missiles have moved onto the battlefield for a variety of assignments. Take air defense as a case in point. First Nike-Ajax and later Nike-Hercules missiles were deployed to provide a protective screen around troops in the field as well as air bases and other vital installations in the rear. When it was discovered that such systems were less effective against low-altitude bombers than high-flying bombers, the Hawk missile was developed. All three are radar-guided.

But there was always the danger that some hostile jets would

slip through, so a small bazooka-like Redeye rocket with a heat-seeking warhead was designed to give the individual soldier a modern weapon to bring down high-performance jets.

All of these systems are effective, but as the Russians have discovered in North Vietnam, they are subject to countermeasures; they increase in effectiveness only when linked with other, frequently older systems.

A Soviet Hercules-like air defense missile, known as the SA-2, has accounted for only about 10 per cent of the American planes downed over North Vietnam. Nearly 90 per cent of the kills are credited to antiaircraft artillery of Korean war vintage.

Part of the reason for the less-than-anticipated missile effectiveness has been due to American ingenuity in developing electronic countermeasure equipment to confuse enemy radar, beam-riding Shrike missiles to destroy radar equipment and evasive flying tactics. But the presence of the missiles frequently forced American planes down into the deadly flak.

Every system is subject to countermeasures. The Russian-designed Styx missile that sank the Israeli destroyer on Oct. 21, for instance, amounts to a winged, pilotless drone that flies

at less than the speed of sound. It can be knocked down by defending fighters, by ship-borne anti-aircraft missiles or ack-ack. At most, the Elath is believed to have had only machine guns for air defense; it is not clear whether they were fired at the approaching missiles.

Soviet Missiles

The Soviets have a variety of antishipping missiles, some of them more modern and longer-range than the 20-mile Styx. These include the Scud and the Shaddock. Some American planners are apprehensive lest they turn up in North Vietnam and are fired against ships of the Seventh Fleet.

The introduction of such weapons would be regarded as a grave escalation of the war that might trigger a counterescalation, such as the mining of Haiphong harbor.

In any case, it would occasion an acid test of the Tartar, Terrier and Talos ship-borne air-defense missiles. The Navy itself has never been fully satisfied with this family of weapons and is rushing development of a better missile to replace all three.

But if antishipping missiles do appear, some Navy men bet a combination of modern airplanes and old-fashioned ack-ack knock most of them out of the sky.